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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,462	01/23/2004	Kenji Yamamoto	4710-0106P	5476

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EXAMINER

MOORE, MARGARET G

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,462

Applicant(s)

YAMAMOTO ET AL.

Examiner

Margaret G. Moore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 to 5, 8 to 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 to 4, 8 to 14 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/9/04, 5/19/04, 6/2/04</u> | 6) <input type="checkbox"/> Other: _____ |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 to 4 and 8 to 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lievre et al. in view of Fau.

Lievre et al. teach a silicone composition used to coat paper. See for instance the abstract. As can be seen from column 2, lines 30 and on, the composition contains a crosslinkable polysiloxane in combination with polyvinyl alcohol. The bottom of column 3 teaches a polyorganosiloxane to PVA ratio that fully embraces the claimed amount of (A) to (C)¹. Column 7, lines 57 and on, teach a water percentage that meets the claimed amount of water (when in combination with the polyorganosiloxane components)².

Column 7, line 16, teaches that the oil in water emulsion is stabilized with at least one surfactant. Thus while not specifically teaching the claimed amount of surfactant, the Examiner notes that an effective amount of surfactant for stabilizing the emulsion will fall within the broadly claimed range for the amount of surfactant in claim 1. Note that It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Column 4, line 6 and on, teaches that the polyorganosiloxane can be a polydiorganosiloxane having terminal hydroxyl groups and that the crosslinking agent can be an organosiloxane having at least three condensable groups or hydrogenated polydiorganosiloxanes. Such siloxanes generally embrace (A) and (B) as claimed.

The teachings in Lievre et al. differ from that claimed only in a few, obvious, ways.

¹ Note that while not specifically teaching the amounts of 100 parts (A) and 50 to 1,000 parts (C) these amounts necessarily are met by a .5 to 10 ratio of (A) to (C).

² Again, while not specifically expressing the water amount in parts by weight, the claimed parts by weight will necessarily be met by the disclosed water content.

First, there is the fact that the actual amount of surfactant is not specifically disclosed. The obviousness of this amount was discussed above.

Second, patentees do not specifically disclose a hydroxyl terminal polydiorgano-siloxane meeting the formula (2). Rather patentees generally teach such a siloxane.

The skilled artisan would have been motivated to turn to analogous arts - other polysiloxane emulsion compositions used in the paper treating art - to arrive at a useful and operable structure for the hydroxyl terminated polydiorganosiloxane. To this extent the skilled artisan would have been motivated to turn to the teachings in Fau.

Fau teaches aqueous polysiloxanes emulsion for treating paper. As can be seen from the abstract, patentees specifically show diorganopolysiloxanes having terminal hydroxyl groups and meeting the formula and viscosity requirements of (A) in claim 2.

Thus one having ordinary skill in the art would have been motivated to select such a known and useful siloxane when choosing a hydroxyl terminated polydiorgano-siloxane used in Fau. In this manner the selection of (A) in the claims is rendered obvious.

Third, patentees fail to teach the amount of crosslinking agent (B). Adjusting the amount of crosslinking agent in an effort to obtain an useful composition and optimize the results thereof would have been well within the skill of the ordinary artisan. Again note that It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

As such the teachings in Lievre et al., in combination with that known in the art as exemplified by Fau, render the instant claims obvious.

In the event that the crosslinking agent in Lievre et al. contains SiH groups, the Examiner also notes that such siloxanes are taught in Fau as being crosslinking agents for hydroxyl terminated siloxanes. The skilled artisan would have been motivated to select an SiH siloxane as taught by Fau for use as the crosslinking agent in Lievre et al.

For claim 8, on one hand note column 2, line 56, which teaches an organosilane crosslinking agent having at least three condensable groups that can be used in addition to the polyhydrosiloxane crosslinking agent. On the other hand, note Fau

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which teaches condensates of a silane (G) used in combination with the Si-H and hydroxyl terminated polydiorganosiloxanes. See the resin (B) in Fau. Since it is known to use such condensates in combination with (A) and (B), the skilled artisan would have been motivated to add this siloxane resin to the composition of Lievre et al. in an effort to obtain the known benefits and properties thereof.

For claim 10, the polyvinyl alcohol in Lievre et al. is, in fact, a copolymer with vinyl acetate. See column 2, lines 63 and on. Column 3 teaches the requirements of claims 12 and 13.

3. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

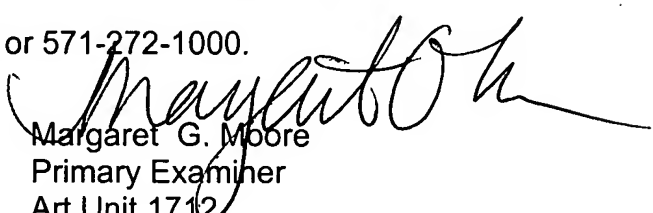
The prior art fails to teach or suggest the presence of a non-reactive polysiloxane (A1) in combination with (A2) as claimed. In addition the Examiner cannot find any motivation to add such a polymer to the system of Lievre et al.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret G. Moore whose telephone number is 571-272-1090. The examiner can normally be reached on Monday to Wednesday and Friday, 10am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Margaret G. Moore
Primary Examiner
Art Unit 1712

mgm
6/14/06